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CLAIMS

1. (currently presented) A private communications network comprising:

an end system configured to communicate with a remote system via a network separate from the private communications network;

a distributed address translation mechanism comprising:

a plurality of network application servers configured to receive a call request from the end system, each of the network application servers including a different pool of addresses associated with different types of data stream stored in and using an address mapping table, wherein the different types include at least one of voice, data and multimedia streams and the network application servers are configured to communicate with the network application server to generate at least one address mapping responsive thereto; and

a packet modifier device, separate from the network application server and configured to receive the at least one address mapping from the plurality of network application servers to map communication packets from the end system for transmission on the separate network.

2. (currently amended) The network of claim 1, wherin:

the end system is configured to communicate with the remote system by sending communication packets to the packet modifier; and

the packet modifier is configured to map communication packets from the end system by substituting at least one of source and destination addresses in the packet according to the mapping from one of the plurality of network application servers.

3. (original) The network of claim 2, wherin the packet modifier is configured to substitute at least a source address in the packet.

4. (currently amended) The network of claim 1, wherin the each network application server is configured to provide the at least one address mapping to the packet modifier via a command according to a predetermined protocol.

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5. (currently amended) A distributed address mapping system for providing address mappings to a packet modifier device, the system comprising:

as a plurality of address mapping table tables, each storing a different pool of addresses, the pools of addresses associated including at least one of voice, data and multimedia pools, and configured to store information on address mappings of at least one of an end system communicable with the address mapping system over a private network, and a remote system communicable with the end system over a separate network; and

a network application server, configured to communicate with the plurality of address mapping table tables, to access the one of the address mapping table tables to obtain the address mapping information and to use the address mapping information to generate a mapping association; and

wherein the packet modifier device is separate from the network application server and the address mapping table tables and is provided for receiving the address mapping information and modifying packets from at least one of the end system and the remote system in accordance with the address mapping information.

6. (currently amended) The system of claim 5, wherein the each address mapping table is configured to store information on an address mapping of at least the end system, and wherein the different pools of addresses include data stream address pools and voice stream address pools

7. (currently amended) The system of claim 5, wherein the network application server is configured to access the plurality of address mapping table tables responsive to a request by the end system to communicate with the remote system.

8. (currently amended) The system of claim 5, wherein the network application server is configured to access the plurality of address mapping table tables responsive to a request by the remote system to communicate with the end system.

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9. (original) The system of claim 5, wherein the network application server is configured to send a command to the packet modifier to push the mapping association to the packet modifier.

10. (currently amended) A method of mapping packets in a communication network, the method comprising:

allocating different pools of addresses to a plurality of address mapping tables distributed in the communication network, the pools of addresses including at least one of voice, data and multimedia pools;

requesting establishment of a communication session between an end system connected to the network and a remote system connected to a separate network;

using a distributed address translation mechanism to identify an address mapping for accessing the remote system, the distributed address translation mechanism including a network application server and a separate packet modifier device, wherein the a network application server performs the steps of accessing ~~an address mapping table connected to the network application server~~ one of the plurality of mapping tables to obtain address mapping data, wherein the one of the plurality of mapping tables is selected according to a pool of addresses associated with the communication session;

and determining an address mapping of at least one of the end system communicable and the remote system based on the address mapping data for forwarding to the separate packet modifier device ; and

modifying, at the packet modifier device, packets sent from one of the end system and the remote system to the other according to the address mapping.

11. (original) The method of claim 10, wherein modifying packets includes modifying packets by substituting addresses of the packets corresponding to the end system.

12. (previously presented) The method of claim 10, wherein:

the network application server is one of a plurality of network application servers, each of the plurality of network application servers serving separate address pools associated with different types of data streams.

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13. (previously presented) The method of claim 10, further comprising using the network application server to communicate the address mapping to the packet modifier device via a command protocol.

14. (currently amended) A method of generating address mappings using a distributed address translation mechanism including a plurality of network application servers and a separate packet modifier device, wherein each of the plurality of network application servers serve separate address pools associated with different types of data streams, the different types including at least one of voice, data and multimedia streams, the method comprising:

receiving, at each of the network application servers, a request to establish a communication session between an end system connected to the network and a remote system connected to a public network;

one of the network application servers accessing an address mapping table connected to the ~~network application server~~ to obtain address mapping information relating to at least one of the end system and the remote system, the one of the network application servers selected responsive to a type of the communication session;

generating an address mapping association based on the address mapping information; and

pushing the mapping association to the separate packet modifier device for modifying packets sent from one of the end system and the remote system to the other.

15. (original) The method of claim 14, wherein the address mapping association relates to at least the end system.

16. (original) The method of claim 14, wherein pushing the mapping association is done using a command language.

17. (currently amended) A private communications network comprising:

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an end system configured to communicate with a remote system via a network separate from the private communications network;

a distributed address translation mechanism comprising:

a plurality of network application server servers to receive a call request indicating the remote system wishes to communicate with the end system, each of the plurality of network application servers serving separate address pools associated with different types of data streams, the different types of data streams including at least one of voice, data and multimedia streams, and using an address mapping table ~~configured to communicate with the network application server~~ to generate at least one address mapping responsive thereto; and

a separate packet modifier device configured to receive a call request from the remote system via the separate network, to receive the address mapping from the network application server and to use the at least one address mapping to map communication packets from the end system for transmission on the private network.

18. (currently amended) The network of claim 17, wherein the packet modifier device is configured to receive communication packets via the separate network from the remote system, process them using the address mapping from the plurality of network application server servers and pass the processed packets to the end system.

19. (currently amended) The network of claim 18, wherein the packet modifier device is configured to process the communication packets by performing a destination address substitution according to the address mapping from the plurality of network application server servers.

20. (currently amended) The network of claim 17, wherein each ~~the~~ network application server is configured to provide the at least one address mapping to the packet modifier device via a command according to a predetermined protocol.

21. (original) The network of claim 20, wherein the protocol is COPS-PR.

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22. (currently amended) The network of claim 17, wherein each the network application server is further configured to send a message to the remote system providing an address on the separate network which will be mapped by the packet modifier device.